IN THE CLAIMS

Please amend the presently pending claims as follows:

1. (Currently Amended) ~~Method~~ A method for the sending of a signal formed by vectors, each vector comprising N source symbols to be sent, and implementing M transmit antennas where M is greater than or equal to 2, ~~characterized in that~~ the method comprising:

~~a linear~~linearly precoding ~~is performed on~~ said signal, implementing a matrix product of a source matrix, formed by said vectors organized in successive rows, by a linear precoding matrix, delivering a precoded matrix, and

~~and in that~~ sending precoded vectors corresponding to columns of said precoded matrix ~~are sent~~ successively, wherein the M symbols of each precoded vector ~~being~~ are distributed over said M antennas.

2. (Currently Amended) ~~Sending~~The method according to claim 1, ~~characterized in that said~~ wherein the precoding matrix ~~is~~ comprises a block matrix.

3. (Currently Amended) ~~Sending~~ The method according to ~~any one of the claims 1 and 2, characterized in that said~~ claim 1, wherein the precoding matrix ~~is~~ comprises a unitary matrix having a size greater than or equal to M.

4. (Currently Amended) ~~Sending~~ The method according to ~~any of the claims 1 to 3, characterized in that said~~ claim 1, wherein the precoding matrix has the form:

$$\Theta_L = \sqrt{\frac{2}{L}} \cdot \begin{bmatrix} \Theta_{L/2} & \Theta_{L/2} \\ \Theta_{L/2} & -\Theta_{L/2} \end{bmatrix}^T$$

with $\Theta_2 = \begin{vmatrix} e^{i\theta_1}\cos\eta & e^{i\theta_2}\sin\eta \\ -e^{-i\theta_2}\sin\eta & e^{-i\theta_1}\cos\eta \end{vmatrix}$

and $\eta = \frac{\pi}{4} + k\frac{\pi}{2}$, $\theta_2 = \theta_1 - \frac{\pi}{2}$, and for $i \in [1,2]$, $\theta_i = \frac{\pi}{4} + k'\frac{\pi}{2}$ where k, k' are relative integers.

5. (Currently Amended) ~~Method~~ A method for the reception of a signal sent on M transmit antennas where M is greater than or equal to 2, implementing P receiver antennas, where P greater than or equal to 2, ~~characterized in that~~ wherein the method comprises:

receiving reception vectors ~~are received~~ on said P antennas ~~and~~ , which are distributed by columns in a reception matrix, ~~the~~ wherein P symbols of ~~a reception~~ each reception vector ~~being~~ are distributed on said P antennas,

~~and in that it implements a~~ processing ~~of~~ said reception matrix, comprising ~~a step of multiplication~~ multiplying by a linear de-precoding matrix representing a linear precoding matrix used at sending, so as to obtain a de-precoded matrix by which it is possible to extract an estimation of ~~the~~ source symbols sent in the signal.

6. (Currently Amended) ~~Reception~~ The method according to claim 5, ~~characterized in that said~~ wherein the de-precoding matrix is the conjugate transpose matrix of said precoding matrix.

7. (Currently Amended) ~~Reception~~ The method according to claim 6, wherein ~~characterized in that,~~ said sent signal ~~being~~ is conveyed between said M transmit antennas and said P receiver antennas by a transmission channel, said reception matrix is multiplied, during said processing ~~operation~~, by a matrix representing the inverse of said transmission channel, so as to obtain a matrix of estimated symbols sent,

~~and in that~~ and wherein said matrix of estimated symbols sent is then multiplied by the de-precoding matrix.

8. (Currently Amended) ~~Reception~~ The method according to ~~any of the claims 6 and 7, characterized in that it~~ claim 6, wherein the method comprises a preliminary step of ~~detection of~~ detecting said M transmit antennas implementing a successive cancellation algorithm.

9. (Currently Amended) ~~Reception~~ The method according to claim 5, wherein ~~characterized in that,~~ said sent signal ~~being~~ is conveyed between said M transmit antennas and said P receiver antennas by a transmission channel, and said de-precoding matrix is an inverse matrix of a total matrix associating the matrix of said channel and said linear precoding matrix.

10. (Currently Amended) ~~Reception~~ The method according to claim 9, ~~characterized in that~~ wherein said de-precoding matrix is determined by implementation of a Cholesky decomposition algorithm.

11. (Currently Amended) ~~Signal~~ A signal comprising: ~~formed by~~ vectors sent successively on M transmit antennas, where M is greater than or equal to 2, the M symbols of each vector being distributed on said M antennas, ~~characterized in that said~~ wherein the vectors are precoded vectors corresponding to columns of a precoded matrix obtained by a matrix product of a linear precoding matrix and a source matrix, formed by source vectors each comprising N source symbols to be sent, said source vectors being organized in said source matrix in successive rows.

12. (Currently Amended) ~~Device~~ A device for sending a signal formed by vectors each comprising N source symbols to be sent, and implementing M transmit antennas, where M is greater than or equal to 2, the device comprising:

~~characterized in that it comprises~~ means of linearly precoding ~~of~~ said signal, implementing a matrix product of a source matrix, formed by said vectors organized in successive rows, by a linear precoding matrix, delivering a precoded matrix, and

means for successively sending precoded vectors corresponding to columns of said precoded matrix, the M symbols of each precoded vector being distributed over said M antennas.

13. (Currently Amended) ~~Device~~ A device for the reception of a signal sent on M transmit antennas, where M is greater than or equal to 2, said device comprising:

P receiver antennas, where P is greater than or equal to 2,

~~characterized in that it comprises~~ means of reception, on said P antennas, of reception vectors, and means of distribution by columns of said reception vectors in a reception matrix, the P symbols of a reception vector being distributed on said P antennas, and

~~in that it comprises~~ means of processing of said reception matrix, comprising means of multiplying by a linear de-precoding matrix representing a linear precoding matrix used at sending, so as to obtain a de-precoded matrix by which it is possible to extract an estimation of ~~the~~ source symbols sent.